

**WHAT IS CLAIMED IS:**

1. A focus voltage generator in a video display apparatus having a cathode ray tube, comprising:

5 a high voltage transformer including a first winding, a focus winding, a high voltage winding and a tracking winding, said tracking winding being disposed closer to said focus winding than to said high voltage winding to provide a tighter magnetic coupling to said focus winding than to said high voltage winding;

10 a semiconductor switch responsive to a periodic signal and coupled to a resonant circuit that includes said first winding for generating resonant pulses in said first winding, said resonant pulses being transformer coupled to said high voltage winding to generate an ultor voltage at an ultor voltage electrode of said cathode ray tube and being transformer coupled to said focus winding to generate a focus voltage at a focus electrode of said cathode ray tube; and

15 a capacitance coupled to said tracking winding to generate from said resonant pulses a current in said capacitance and in said tracking winding that selects a mode of tracking between said focus and ultor voltages, as a function of a beam current in said cathode ray tube.

20 2. The focus voltage generator according to Claim 1 wherein said resonant pulses are at a frequency that is an integer multiple of a current in a horizontal deflection winding.

3. The focus voltage generator according to Claim 1 wherein said first and tracking windings are conductively coupled to each other.

4. The focus voltage generator according to Claim 1 wherein said first and tracking windings form corresponding portions of a primary winding.

25 5. The focus voltage generator according to Claim 1 wherein each of said first and tracking windings and a main current conducting terminal of a switching transistor that is included in said semiconductor switch is coupled at a common junction terminal.

30 6. The focus voltage generator according to Claim 5 wherein a terminal of said tracking winding that is coupled closer to said capacitance develops a lower voltage than a terminal of said tracking winding that is coupled closer to said main current conducting terminal of said switching transistor.

7. The focus voltage generator according to Claim 1 wherein said high voltage winding and said focus winding are coupled to each other at a common junction terminal and wherein said ultor voltage is generated from both said high voltage winding and said focus winding.